

D-7110

IRM-1. 10

JAN 27 1998

MEMORANDUM

To: Director, Office of Information Resources **Management, Washington DC**
Attention: David Brandt, Y2K Coordinator

From: Kathy E. Gordon
Director, Management Services

Subject: GAO Electronic Data Interchange (EDI) Questionnaire

Attached is the completed GAO questionnaire from Reclamation on EDI. The, attached references only those applications which are mission critical and were planned for renovation for Y2K compliancy.

Any questions regarding this report may be directed to Kent N. Rosenlof of our staff. He may be reached at (303) 236-9335, extension 613, or e-mailed to krosenlof.

Attachment

bc: Commissioner, Attention: W-1100, W-6000
Regional Director, PN, MP, LC, UC, GP
Attention: PN-7505 (Vanderwal), PN-7510 (Stevens), MP-1130 (Sparks),
MP-3100 (Anderson), LC-5100 (Gettler), LC-5121 (Cunningham),
UC-540 (Mitchell), UC-556 (Richardson), GP-3200 (Soucy, Pfaff)

D-5010, D-7000, D-7110, D-7130, D-7160

WBR:KRosenlof:mj:1/21/98:236-9335x613 (lan:\doc\7110\rosenlof\jangao.mem)

United States General Accounting Office
**Survey of Year 2000-related Electronic
Data Exchange Issues**

The Ranking Minority Member of the Subcommittee on Technology, Senate Committee on Science, has **asked GAO to** perform a governmentwide review of efforts to address the Year 2000 problem associated with electronic data exchanges.

Specifically, we have been asked to identify (1) key actions taken by federal agencies to address electronic data exchanges among federal, state, and local governments; and (2) federal efforts to minimize the potential adverse impact of non-compliant Year 2000 data from foreign sources on our nation's computer systems.

Your participation in this survey is critical, and we appreciate your time in assisting us in this inquiry. The questions in this survey can be answered by filling in the blanks. We are providing a computer disk containing the questionnaire in both WordPerfect 6.0 and Microsoft Word 7.0 formats, for your use in replying. It is important that you answer every question.

We know that in some cases a Department's Year 2000 program office will have the Department-level data exchange information readily available. In other cases the data exchange information may be available only at the Department's component-level organizations, and must therefore be collected and aggregated. In either case, please report only aggregate data for your Department or agency.

We realize that there may be some instances where this information may be difficult to obtain. In these

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cases, please give us your best estimate and annotate the entry with an asterisk (*) or state that the information is not available. For your assistance, a glossary of terms used in the questionnaire is attached at the back.

Please provide your completed questionnaire no later

than January 23, 1998

The return address is:

Joel C. Willemsen, Director
Information Resources Management
Accounting and Information Management
Division
U.S. General Accounting Office
441 G Street, NW, Room 4R26
Washington, DC, 20548

We are also asking that you provide the name and telephone number of a contact for your Department or agency who can answer any questions we may have about your questionnaire responses.

Department or Agency Contact

Name: - Kent N. Rosenlof
Title: -IT Security Manager~_
Organization: *Information Resources Services*
Telephone: (303) 236-9335, ext. 613
Fax: _ (303) _236-8472
E-mail: *_krosenloj@dousbrgov*

If you have any questions, please contact:

James Hamilton
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Department/Agency: *-Bureau of Reclamation*

I For your mission-critical systems, please provide the following status information:

- a. # 17 mission-critical systems
- b. # 7 mission-critical systems with **external data** exchanges (incoming or outgoing)

2. For your mission-critical systems with external data exchanges, please provide the number of

- a. # 8 incoming data exchanges
- b. # 9 outgoing data exchanges
- c # 17 total incoming and outgoing data exchanges

(An electronic data exchange is the transfer (sending or receiving) of a data set using electronic media. All revisions to data exchanges (for example, timing or format), require notifications and/or agreements with each exchange partner. For consistency of reporting, a data set transferred to 5 exchange partners would constitute 5 data exchanges.)

3. For the mission-critical systems with external electronic data exchanges (2.c.), please provide the number of **data exchanges** that you have

- a. # 17 assessed for Year 2000 compliance
- b. # 0 not assessed for Year 2000 compliance

For those assessed (3.a.):

- c. # 11 identified as compliant
- d. # 6 identified as non-compliant

For those identified as non-compliant (3.d.):

- e. 2 developed a validation process for incoming external data
- f. 0 determined a need for data bridges or filters
- g. 6 developed contingency plans if no data are received from an external source
- h. 6 developed contingency plans for invalid data

4. For external data exchanges where bridges or filters are needed (3.f). Please provide the number that have been developed and tested:

- a. 2 developed
- b. 0 tested

(A bridge or filter can be developed for a specific data set transfer, regardless of the number of exchange partners. For consistency of reporting, bridges or filters are counted as one for each specific data set transfer, regardless of the number of data exchanges to which they apply.)

5. For mission-critical systems with external data exchanges (2.c.), please provide, for each type of entity listed, the number of such external entities involved, total external exchanges with these entities, external exchanges

where the entity has been contacted, and external exchanges where agreements have been reached on the **resolution** of problems.

Please fill in the numbers in the spaces provided.

Type of Entity	Number-----		External Exchanges -----		
	of External	Entities	Total	Contacts	Agreements
			Exchanges	Made	Reached
Other federal agencies	a.	4	b. -5-	c. - 4	d. 4
State agencies	e.	I	f -I-	9--I-	h. -i
Local governments/authorities	i.		i-	k.	l.
U.S. private sector	m.	2	n. 3	o. - I	P. -1
Foreign government	q.		r.	s.	t.
Foreign private sector	u.		v.	w.	x.

6. a. Has your organization, or your component organizations, adopted a date format standard for data exchanges with external entities?

-X- Yes (continue with part b. - provide answers for each component organization, if applicable)
No (skip to part c.)

b. If yes, has your organization adopted the 4-digit contiguous year format as specified by FIPS 4-1 and OMB Memorandum of April 8, 1997?

-X- Yes (skip to question 7)
No (continue with part c.)

c. If your organization has not adopted a 4-digit contiguous year format for data exchanges, please describe the date format(s) your organization is using.

7. What are the number of your current and planned **external data exchanges that use the following message formats?** Please fill in the numbers in the spaces provided.

Additional

Current	Planned	Format
a.	i.	ANSI ASC X12
b.	j.	Fedwire
c.	k.	CHIPS
d.	l.	FIL7
e.	m.	UN/EDIFACT
f #	n.	EDI Medicare
g. # 3	o.	flat file
h. # -4-	p.	other (describe) __htn-d, postscript, shef (Hydromet)

8. What types of mission-related effects may result if external data exchange failures occur, such as the inability to transfer payments, process applications for program benefits or grants, monitor program operations, etc.? Shelf Hydromet): Minor reductions in capability to manage/monitor water resources, A much greater Impact on agencies receiving data from Reclamation

Regulatory/Oversight Responsibilities

9. Do you, or your component organizations, have regulatory/oversight responsibilities over organizations that use electronic data exchanges to support their mission-critical systems?

Yes (continue - provide answers for each component organization, if applicable) No (go to question 14)

10. What types of organizations do you regulate/oversee?

11. For organizations over which you have regulatory/oversight responsibility, what approach have you used in working with the organizations to address Year 2000 problems so that they will be able to exchange data needed for mission-critical operations? (check all that apply)

- a. Issued guidance that addresses Year 2000 problems (if yes, please provide a copy)
- b. Issued guidance that addresses data exchange issues (if yes, please provide a copy)
- c. Established working groups or forums to address data exchange issues
- d. Established Year 2000 inspection/validation program (if yes, please provide a copy)
- e. Used other approaches to addressing data exchange issues (if so, please describe)

12. Which of the following message formats are these organizations using or planning to use? (check all that **apply**)

Additional

Current	Planned	Format
a. i.	ANSI ASC X12	
b. j.	Fedwire	
c. k.	CHIPS	
d. l.	BL7	
e. m.	UN/EDIFACT	
f. n.	EDI Medicare	
g. o.	flat file	
h. p.	other (describe)	

13. a. Are you, or your component organizations, monitoring the progress of those organizations over which you have regulatory/oversight responsibilities in addressing Year 2000 date conversion problems?

Yes (continue - provide answers for each component organization, if applicable) No (go to question 14)

No (go to question 14)

b. If yes, please provide the AgJ1W or your best estimate of the percent of the organizations that fall into each of the following categories. (answers should total 100 percent)

- | | |
|--------|--|
| 1. % | Organization is not aware of the issues |
| 2. % - | Aware of the issues, may have informal inventory and estimates |
| 3. % | Have a detailed inventory and cost estimates |
| 4. % | Have a detailed plan, resources allocated, project underway |
| 5. % | All mission-critical. changes complete |
| 6. % | All changes complete |

c. Please indicate whether the above information is based on:

7. _ actual data reported to you
8. _ your best estimate

d. What is your estimate of the number and percent of these organizations that are at risk of not resolving date conversion problems before the Year 2000?

9. # organizations at risk

10. % organizations at risk

International Data Exchanges

14. Do you, or your component organizations, have regulatory/oversight responsibility for organizations that use electronic data exchanges with entities located outside of the United States?

Yes (continue - provide answers for each component organization, if applicable)

☒ No (go to question 19)

15. What approach have you used in working with these organizations to address Year 2000 problems with international data exchanges?

16. a. For organizations performing international data exchanges, have you been monitoring the progress in addressing Year 2000 date conversions problems?

Yes (continue - provide answers for each component organization, if applicable)

-No (go to question 21)

- b. Please provide the actual or your best estimate of the percent of the organizations that fall in each of the following categories. (answers should total 100 percent)

- Organization is not fully aware of the issues

(2.)_ Aware of the issues, may have informal inventory and estimates

(3.)_ Have a detailed inventory and cost estimates

(4.)_ Have a detailed plan, resources allocated, projects underway

(5.)_ All mission-critical changes complete

(6.) - All changes complete

- c. Please indicate whether the above information above is based on:

(7.) data reported to you

(8.) your best estimate

- d. What is your estimate of the percent of these organizations that are at risk of not resolving date conversion problems before the Year 2000?

(9.) % _ organization at risk

17. Which formats are these organizations using or planning to use for international data exchanges? (check all that apply)

Additional		
Current	Planned	Format
a.	i.	ANSI ASC X12
b.	j.	Fedwire
c.	k.	CHIPS
d.	l.	BL7
e.	m.	UN/EDIFACT
f.	n.	EDI Medicare
g.	o.	flat file
h.	p.	other (describe)

18. What international forums are available for these organizations to use in addressing Year 2000 problems?

Overall

19. What barriers, if any, must be overcome in your efforts to resolve Year 2000 data exchange problems?

None

20. Please feel free to provide us with any other comment you feel will help us meet our study objectives.

Thank you.

GLOSSARY

ANSI ASC X12	American National Standards Institute Accredited Standards Committee X12. These are electronic data interchange standards governing transaction sets, segments, data elements, code sets, and interchange control structure. Standards provide the framework for how a specific EDI message will be formatted for transmission.
Bridge	In the context of the Year 2000 program, a software capable of distinguishing between 2-digit and 4-digit year formats. Bridges are used to convert the incoming data to an appropriate date format when the sending system is not Year 2000 compliant
CHIEPS	The Clearing House Interbank Payments System: a computerized network for transfer of international dollar payments. CHIP S link 115 depository institutions which have offices in New York City.
Contingency plan	In the context of the Year 2000 program, a plan for responding to the inability of a system to operate due to a failure to achieve Year 2000 compliancy. In general, a contingency plan describes the steps the enterprise would take--including the activation of manual or contract processes--to ensure the continuity of its core business processes in the event of a Year 2000-induced system failure.
EDI	Electronic Data Interchange. The electronic transfer of preformatted business documents, such as purchase orders and bills of lading, between trading partners.
Filter	A software that processes an input data stream into an output data stream in some well-defined way. In the context of the Year 2000 program, a software that filters out incoming year 2000 non-compliant data.
EDI Medicare Fedwire	ANSI ASC X12 standards for the formatting and transmission of Medicare documents. Federal Reserve Board's electronic funds and securities transfer service. FaWe is used by Federal Reserve Banks and branches, the Department of the Treasury, other government agencies, and depository institutions.
FJIPS 4-1 Calendar	Federal Information Processing Standards Publication 4- 1, Representation for Date and Ordinal Date for information Interchange.
Flat file	A single file containing either binary or text (plain ASCII) data with an implied structure, such as database. Flat text files are more portable among different operating systems and application programs than binary ones.
HL7	A standard for electronic data exchange in health care environments.
Mission-critical system	A system supporting a core business activity or process.
System	A system may be defined as a collection of software applications designed to support one or more distinct business processes.

UN/EDIEFACT

United Nations-supported international electronic message standard for administration, commerce, and transport.

Validation

The process of evaluating a system, component, or an computer system output to determine whether it satisfies specified requirements.